

I Claim:

1. A prosthesis to replace a natural articular process of a natural facet joint on a vertebral body comprising

5 a prosthesis body accommodating fixation to the vertebral body at or near a pedicle and without support by a lamina, and

an artificial facet joint structure carried by the prosthesis body adapted and configured to replace a
10 natural articular process of a natural facet joint.

2. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a natural facet joint after removal of at
15 least some of a lamina from the vertebral body.

3. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a natural facet joint after removal of at
20 least part of an accessory process from the vertebral body

4. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular
25 process of a natural facet joint after removal of at least part of a transverse process from the vertebral body

5. A prosthesis according to claim 1 wherein the artificial facet joint structure
30 is adapted and configured to replace a natural articular process of a natural facet joint after removal of at least part of a pedicle from the vertebral body.

6. A prosthesis according to claim 1 wherein the artificial facet joint structure
35 is adapted and configured to replace a natural articular

process of a natural facet joint after removal of at least some of the natural articular process from the vertebral body.

5 7. A prosthesis according to claim 1
 wherein the artificial facet joint structure
is adapted and configured to replace a natural articular
process of a natural facet joint after removal of at
least some of the natural articular process and of at
least some of a lamina from the vertebral body.

10 8. A prosthesis according to claim 1
 wherein the artificial facet joint structure
is adapted and configured to replace a natural articular
process of a natural facet joint after removal of at
least some of the natural articular process and of at
15 least some of an accessory process from the vertebral
body.

 9. A prosthesis according to claim 1
 wherein the artificial facet joint structure
is adapted and configured to replace a natural articular
20 process of a natural facet joint after removal of at
least some of the natural articular process and of at
least part of a transverse process from the vertebral
body.

 10. A prosthesis according to claim 1
25 wherein the artificial facet joint structure
is adapted and configured to replace a natural articular
process of a natural facet joint after removal of at
least some of the natural articular process and of at
least part of a pedicle from the vertebral body.

30 11. A prosthesis according to claim 1
 wherein the artificial facet joint structure
is adapted and configured to replace a natural articular
process of a natural facet joint, and

 wherein the prosthesis body is adapted and
35 configured to replace at least some of a lamina of the

vertebral body.

12. A prosthesis according to claim 1
wherein the artificial facet joint structure
is adapted and configured to replace a natural articular
5 process of a natural facet joint, and

wherein the prosthesis body is adapted and
configured to replace at least some of a mamillary
process of the vertebral body.

13. A prosthesis according to claim 1
10 wherein the artificial facet joint structure
is adapted and configured to replace a natural articular
process of a natural facet joint, and

wherein the prosthesis body is adapted and
configured to replace at least some of a pedicle of the
15 vertebral body.

14. A prosthesis according to claim 1
wherein the prosthesis body is adapted and
configured to replace at least some of a lamina of the
vertebral body.

15. A prosthesis according to claim 1
20 wherein the prosthesis body is adapted and
configured to replace at least some of a mamillary
process of the vertebral body.

16. A prosthesis according to claim 1
25 wherein the prosthesis body is adapted and
configured to replace at least some of a pedicle of the
vertebral body.

17. A prosthesis according to claim 1
wherein the artificial facet joint structure
30 is adapted and configured to articulate with a portion of
a facet joint of an adjoining vertebral body.

18. A prosthesis according to claim 1
wherein the artificial facet joint structure
is made of at least one selected prosthetic material.

19. A prosthesis according to claim 1
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wherein the selected prosthetic material includes polyethylene, rubber, tantalum, titanium, chrome cobalt, surgical steel, bony in-growth material, ceramic, artificial bone, or a combination thereof.

5 20. A method of replacing, on a vertebral body, all or a portion of a natural articular process of a natural facet joint using the prosthesis defined in claim 1 to provide improved support for the spinal column, the method comprising the steps of

10 (i) removing all or a portion of the natural articular process from the vertebral body, and

 (ii) fixing the prosthesis as defined in claim 1 to the vertebral body to replace the removed portion of the natural articular process with the artificial facet joint structure.

15 21. A method according to claim 20 further including a step of removing at least some of the lamina from the vertebral body.

 22. A method according to claim 20 further including a step of removing at least part of a pedicle from the vertebral body.

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